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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Dawson, Jr. et al.**

Serial No.: **09/692,988**

Filed: **October 20, 2000**

For: **Method and System for
Protecting Pervasive Devices and
Servers from Exchanging Viruses**



Group Art Unit: **2131**

Examiner: **Revak, Christopher A.**

Attorney Docket No.: **RSW920000076US1**

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By:

Carrie Parker
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Respectfully submitted,

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Docket No. RSW9200000762S1



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Dawson, Jr. et al.** §
§ Group Art Unit: 2131
Serial No. **09/692,988** §
§ Examiner: **Christopher A. Revak**
Filed: **October 20, 2000** §
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For: **Method and System for** §
Protecting Pervasive Devices and §
Servers from Exchanging Viruses §

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APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on August 10, 2004.

The fees required under § 41.20 (B) (2), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

10/13/2004 HGUTEMA1 00000009 090461 09692988

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REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party:

International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-31

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: none
2. Claims withdrawn from consideration but not canceled: none
3. Claims pending: 1-31
4. Claims allowed: none
5. Claims objected to: none
6. Claims rejected: 1-31

C. CLAIMS ON APPEAL

The claims on appeal are: 1-31

STATUS OF AMENDMENTS

All of the amendments to the claims have been entered. No after final amendments were made in this case.

SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The present invention provides a method for protecting clients and servers from exchanging viruses as described on page 12, lines 17-19 of the Specification. The present invention recognizes that many clients, such as pervasive devices, communicate with servers via synchronization as described on page 12, lines 19-21 of the Specification. This type of communication results in incremental updates to data or software being stored on a server for a client as described on page 12, lines 21-23 of the Specification. With this situation, it is possible for a virus to contain two or more parts in which the individual parts are harmless as described on page 12, line 23 to page 13, line 1 of the Specification. When all of the parts are put together, however, the aggregate results in a virus as described on page 13, lines 1-3 of the Specification. With incremental updates, latent viruses, such as these, may be propagated to servers and other clients as described on page 13, lines 3-4 of the Specification.

Independent claim 1 recites a method for protecting clients and servers from exchanging viruses as described on page 5, lines 2-3 of the Specification. Preexisting content is maintained for a device in a first location as described on page 5, lines 4-5 of the Specification. New content for the device is placed in a second location, wherein the new information is an update to the preexisting data as described on page 5, lines 5-7 of the Specification. The preexisting content and the new data are combined in a third location to form merged content as described on page 5, lines 7-8 of the Specification. A check for viruses is performed on the merged data prior to performing a transfer of the new content as described on page 5, lines 8-10 of the Specification.

B. CLAIM 10 - INDEPENDENT

Independent claim 10 recites a data processing system for preventing transmission of viruses. A request is received to synchronize a device as described on page 15, lines 11-14 of the Specification. New content associated with the device is identified as described on page 15, lines 11-14 of the Specification. The new content is combined with existing content to form merged content, and the merged content is checked for viruses prior to synchronizing the device as described on page 15, line 14 to page 16, line 13 of the Specification.

C. CLAIM 13 - INDEPENDENT

Independent claim 13 recites a data processing system with a bus system and a memory connected to the bus system, wherein the memory includes a set of instructions as described on page 10, line 1 to page 11 line 7 of the Specification and blocks 206, 208, and 209 in Figure 2. The data processing system also includes a processing unit connected to the bus system as shown in blocks 202, 204, and 206 in Figure 2, wherein the processing unit executes the set of instructions to maintain preexisting content for a device in a first location as described on page 5, lines 4-5 of the Specification, place new content associated with the device in a second location, wherein the new content is an update to the preexisting content as described on page 5, lines 5-7 of the Specification, combine the preexisting content and the new content in a third location to form merged content as described on page 5, lines 7-8 of the Specification, and perform a check for viruses on the merged content as described on page 5, lines 8-10 of the Specification.

D. CLAIM 18 - INDEPENDENT

Independent claim 18 recites a data processing system for preventing exchange of viruses. The maintaining means for maintaining preexisting content for a device in a first location is performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 5, lines 4-5 of the Specification, and blocks 200, 202 and 204 in Figure 2. The placing means for placing new content associated with the device in a second location, wherein the new content is an update to the preexisting content is performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 5, lines 5-7 of the Specification, and blocks 200, 202 and 204 in Figure 2. The combining means for combining the preexisting content and the new content in a third location to form merged content is performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 5, lines 7-8 of the Specification, and blocks 200, 202 and 204 in Figure 2. The performing means for performing a check for viruses on the merged content prior to performing a transfer of the new content is performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 15, line 14 to page 16 line 13 of the Specification, and blocks 200, 202 and 204 in Figure 2.

E. CLAIM 27 - INDEPENDENT

Claim 27 recites a data processing system for preventing transmission of viruses data processing system for preventing exchange of viruses as described on page 5, lines 2-3 of the Specification. The receiving means for receiving a request to synchronize a device may be performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 15, lines 11-14 of the Specification, and blocks 200, 202 and 204 in Figure 2. The identifying means for identifying new content associated with the device may be performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 15, lines 11-14 of the Specification, and blocks 200, 202 and 204 in Figure 2. The combining means for combining the new content with existing content to form merged content may be performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 15, line 14 to page 16, line 13 of the Specification, and blocks 200, 202 and 204 in Figure 2. The checking means for checking the merged content for viruses prior to synchronizing the device may also be performed by a data processing system as described on page 10, lines 4-6, page 15, lines 6-8, and page 15, line 14 to page 16, line 13 of the Specification, and blocks 200, 202 and 204 in Figure 2.

F. CLAIM 30 - INDEPENDENT

Claim 30 recites a computer program product with computer implemented instructions for preventing exchange of viruses. The computer program product includes instructions for maintaining preexisting content for a device in a first location as described on page 5, lines 4-5 of the Specification, for placing new content for the device in a second location, wherein the new information is an update to the preexisting data as described on page 5, lines 5-7 of the Specification, for combining the preexisting content and the new data in a third location to form merged content as described on page 5, lines 7-8 of the Specification, and for performing a check for viruses on the merged data prior to performing a transfer of the new content as described on page 5, lines 8-10 of the Specification.

G. CLAIM 31 - INDEPENDENT

Claim 31 recites a computer program product with computer implemented instructions for preventing transmission of viruses. The computer program product includes instructions for

receiving a request to synchronize a device as described on page 15, lines 11-14 of the Specification, for identifying new content associated with the device as described on page 15, lines 11-14 of the Specification, for combining the new content with existing content to form merged content and checking the merged content for viruses prior to synchronizing the device as described on page 15, line 14 to page 16, line 13 of the Specification.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. GROUND OF REJECTION 1

Claims 1, 4, 5, 9-10, 13, 18, 21-22, 26-27 and 30-31 stand rejected under 35 U.S.C. § 102 as anticipated by “Hot!NEWstuff: McAfee: Antivirus software for handhelds” to *Meikle*.

B. GROUND OF REJECTION 2

Claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 stand rejected under 35 U.S.C. § 103(a) as obvious over Hot!NEWstuff: McAfee: Antivirus Software for handhelds to *Meikle*.

C. GROUND OF REJECTION 3

Claims 6, 7, 23, and 24 stand rejected under 35 U.S.C. § 103(a) as obvious over Hot!NEWstuff: McAfee: Antivirus Software for handhelds to *Meikle*, in view of PC WORLD: Do Handhelds Need Virus Protection? to *Silver*.

ARGUMENT

I. Ground Of Rejection For Claims 1, 4, 5, 9-10, 13, 18, 21-22, 26-27 and 30-31 under 35 U.S.C. § 102

The examiner has rejected claims 1, 4, 5, 9-10, 13, 18, 21-22, 26-27 and 30-31 under 35 U.S.C. § 102 as being anticipated by “Hot!NEWstuff: McAfee: Antivirus software for handhelds” to *Meikle*. This rejection is respectfully traversed.

With regard to claims 1, 18, 30, and 31, the examiner states:

As per claims 1, 18, 30 and 31, *Meikle* teaches a method/data processing system/computer program product for preventing exchange of viruses, comprising:

Maintaining preexisting content for a device in a first location (the handhelds in *Meikle* maintain preexisting content which is to be synchronized with the content on a pc); placing new content associated with the device in a second location (the new content is on the pc in *Meikle*), wherein the new content is an update to the preexisting content (*Meikle* says that the operation is a synchronization). This constitutes an update to preexisting content); combining the preexisting content and the new content in a third location to form merged content and performing a check for viruses on the merged content prior to performing a transfer of the new content (prior to the completion of the synchronization the pc scans content located on the handheld by uploading it, and then the synchronized/merged content is uploaded to the handheld).

(Office Action dated January 29, 2004, pages 3-4).

A prior art reference anticipates the claimed invention under 35 U.S.C. §102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Meikle* reference cited by the Examiner does not anticipate the present invention as recited in claim 1, because *Meikle* fails to teach each and every element of claim 1. Amended independent claim 1, which is representative of independent claims 10, 13, 18, 27, 30, and 31 with regard to similarly recited subject matter, reads as follows:

1. A method in a data processing system for preventing exchange of viruses, the method comprising:
 - maintaining preexisting content for a device in a first location;
 - placing new content associated with the device in a second location,
 - wherein the new content is an update to the preexisting content;

combining the preexisting content and the new content in a third location to form merged content; and

performing a check for viruses on the merged content prior to performing a transfer of the new content.

Claim 1 of the present invention recites the features of combining preexisting content (in a first location) and new content (in a second location) to form a merged content in a third location, and performing a check for viruses on the merged content prior to performing a transfer of the new content. Thus, content in one location is combined with content in a second location, and this combined or merged content is placed in a third location. The merged content is then checked to determine whether a virus is present in the combined or merged content prior to performing a transfer of the new content.

Meikle does not teach combining a preexisting content and a new content in a third location to form merged content, and then performing a check for viruses on the merged content prior to performing a transfer of the new content, as recited in claim 1. Instead, *Meikle* teaches using antivirus software on a desktop computer to scan a handheld device to detect known viruses when files on the PC and handheld are synchronized, as described in the following passage:

McAfee has begun offering antivirus software to protect devices from the nascent threat of bugs written for handheld computers. The new software --McAfee VirusScan Handheld -- keeps known viruses from being transmitted between a desktop computer and handheld devices running the Palm operating system, Symbian's EPOC operating system, and Windows CE or its successor, Pocket PC, said product marketing manager Ryan McGee.

This product begins to address a new, largely unprotected domain where viruses could spread. Though limited by bare-bones operating systems, handhelds are gaining in power and popularity, and sellers are avidly pushing devices that connect wirelessly to the Internet. A virus in Spain called *Timofonica* already attacked some cell phones.

However, the antivirus software doesn't yet run on the handheld itself. Instead, it runs only on a desktop computer and scans the handheld device when files on the PC and handheld are synchronized, McGee said. That means the handheld is still open to virus transmission when it exchanges information directly with the Internet or with another handheld.

E-Secure unveiled software two weeks ago that runs on EPOC, an operating system designed by a cell-phone maker consortium called Symbian for smart cell phones and other handheld devices.

(*Meikle*, page 12-13). As can be seen from the passage above, there is no mention of combining preexisting content in a first location and new content in a second location to form merged data in a third location, as the Examiner asserts. The *Meikle* reference does not provide any detail as to how the virus scan of the device is performed, other than that the antivirus software “scans the handheld device”. There is no mention in the synchronization of the files on the PC and handheld device in *Meikle* of using merged content in a third location to scan for viruses prior to transferring the new content. *Meikle* merely teaches that when a handheld device makes a synchronization request, the antivirus software present on a PC scans the handheld device. In other words, the *Meikle* merely teaches scanning the device content when files on the PC and handheld are synchronized, but there is no teaching in *Meikle* of combining the new content with preexisting content on the PC to form a merged content in a third location, nor does *Meikle* mention that a third location containing merged data is checked for viruses prior to performing a transfer of the new content. In fact, by teaching that the device content is scanned for viruses when files on the PC and handheld are synchronized, the *Meikle* reference teaches exactly what the present invention is trying to prevent – the incremental update situation where a virus contains two or more parts in which the individual parts are harmless, but the aggregate of the parts results in a virus.

In view of the above, *Meikle* fails to teach each and every element of independent claim 1. Using antivirus software on a desktop computer to scan a handheld device when files on the PC and handheld are synchronized in *Meikle* does not teach the present invention’s features of combining preexisting content (in a first location) and new content (in a second location) to form a merged content in a third location, and then performing a check for viruses on the merged content prior to performing a transfer of the new content. As a result, the *Meikle* reference fails to anticipate independent claims 1, 10, 13, 18, 27, 30, and 31 of the present invention.

Moreover, *Meikle* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Meikle* actually teaches away from the presently claimed invention because it merely teaches scanning the handheld device for viruses during synchronization as opposed to first combining the new content with preexisting content on the PC to form a merged content in a third location, and then performing a check for viruses on the merged content prior to performing a transfer of the new content, as recited in the

presently claimed invention. Absent the examiner pointing out some teaching or incentive to implement *Meikle* and combining the new content with preexisting content on the PC to form a merged content in a third location and then performing a check for viruses on the merged content prior to performing a transfer of the new content, one of ordinary skill in the art would not be led to modify *Meikle* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Meikle* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

Applicants submit that independent claims 1, 10, 13, 18, 27, 30, and 31 are not taught by *Meikle*. Claims 2-9, 11-12, 14-17, 19-26, and 28-29 are dependent claims depending on independent claims 1, 10, 13, 18, and 27, respectively. Applicants have already demonstrated claims 1, 10, 13, 18, and 27 to be in condition for allowance. Applicants respectfully submit that claims 2-9, 11-12, 14-17, 19-26, and 28-29 are also allowable, at least by virtue of their dependency on allowable claims.

Therefore, the rejection of claims 1, 4, 5, 9-10, 13, 18, 21-22, 26-27 and 30-31 under 35 U.S.C. § 102 has been overcome.

II. Ground Of Rejection For Claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 under 35 U.S.C. § 103

The examiner has rejected claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 under 35 U.S.C. § 103 as being unpatentable over Hot!NEWstuff: McAfee: Antivirus Software for handhelds to *Meikle*. This rejection is respectfully traversed.

As for claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29, the *Meikle* reference fails to teach or suggest the present invention as recited in claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29. Claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 are dependent claims depending from claims 1, 10, 13, 18, and 27, respectively. The *Meikle* reference still does not teach or suggest all the claim limitations in claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29, as argued in the response to the rejection of independent claim 1 above. Consequently, claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 are patentable over the cited reference because *Meikle* would not reach the presently claimed invention. The features relied upon as being taught in the *Meikle* reference are not taught or suggested by that reference, as explained above. As a result, a combination of

these references would not reach the claimed invention in claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29. Thus, applicants respectfully submit that claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 are also allowable, at least by virtue of their dependency on allowable claims.

Therefore, the rejection of claims 2, 3, 8, 11-12, 14-17, 19-20, 25, and 28-29 under 35 U.S.C. § 103 has been overcome.

III. Ground Of Rejection For Claims 6, 7, 23, and 24 under 35 U.S.C. § 103

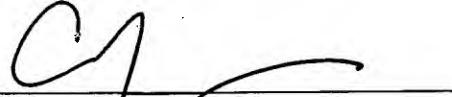
The examiner has rejected claims 6, 7, 23, and 24 under 35 U.S.C. § 103 as being unpatentable over Hot!NEWstuff: McAfee: Antivirus Software for handhelds to *Meikle*, in view of PC WORLD: Do Handhelds Need Virus Protection? to *Silver*. This rejection is respectfully traversed.

The combination of *Meikle* and *Silver* fail to teach or suggest the present invention as recited in claims 6, 7, 23, and 24. Although *Silver* may teach storing an antivirus application on the host PC, (*Silver*, page 1 under “Alternative Approaches”), the *Meikle* reference still does not teach or suggest all the claim limitations in claims 6, 7, 23, and 24, as argued in the response to the rejection of claim 1 above. Claims 6, 7, 23, and 24 are patentable over the cited references because the combination of the *Meikle* reference with *Silver* would not reach the presently claimed invention. The features relied upon as being taught in the *Meikle* reference are not taught or suggested by that reference, as explained above. As a result, a combination of these references would not reach the claimed invention in claims 6, 7, 23, and 24.

Therefore, the rejection of claims 6, 7, 23, and 24 under 35 U.S.C. § 103 has been overcome.

CONCLUSION

In view of the comments above, it is respectfully urged that the rejection of claims 1-31 not be sustained.



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CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method in a data processing system for preventing exchange of viruses, the method comprising:

maintaining preexisting content for a device in a first location;

placing new content associated with the device in a second location, wherein the new content is an update to the preexisting content;

combining the preexisting content and the new content in a third location to form merged content; and

performing a check for viruses on the merged content prior to performing a transfer of the new content.

2. The method of claim 1 further comprising:

sending the merged content to the device if a virus is absent from the merged content.

3. The method of claim 1 further comprising:

storing the merged content as the preexisting content if a virus is absent from the merged content.

4. The method of claim 1, wherein the device is a wireless device.

5. The method of claim 1, wherein the device is one of a personal digital assistant, a laptop computer, a wireless telephone, and a personal computer.

6. The method of claim 1, wherein the first location is a hard disk drive in the data processing system.
7. The method of claim 1, wherein the first location is a hard disk drive in a storage system remote to the data processing system.
8. The method of claim 1, wherein the third location is a random access memory in the data processing system.
9. The method of claim 1, wherein the steps of placing, maintaining, and performing are initiated in response to a synchronization process between the data processing system and the device.
10. A method in a data processing system for preventing transmission of viruses, comprising the steps of:
 - receiving a request to synchronize a device;
 - identifying new content associated with the device;
 - combining the new content with existing content to form merged content; and
 - checking the merged content for viruses prior to synchronizing the device.
11. The method of claim 10, wherein the new content is content received from the device.

12. The method of claim 10, wherein the new content is content to be sent to the device.

13. A data processing system comprising:
 - a bus system;
 - a memory connected to the bus system, wherein the memory includes a set of instructions; and
 - a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to maintain preexisting content for a device in a first location, place new content associated with the device in a second location, wherein the new content is an update to the preexisting content, combine the preexisting content and the new content in a third location to form merged content, and perform a check for viruses on the merged content.

14. The data processing system of claim 13, wherein the bus system includes a primary bus and a secondary bus.

15. The data processing system of claim 13, wherein the bus system comprises a single bus.

16. The data processing system of claim 13, wherein the processing unit includes a plurality of processors.

17. The data processing system of claim 13, wherein the processing unit includes a single processor.

18. A data processing system for preventing exchange of viruses, the data processing system comprising:

maintaining means for maintaining preexisting content for a device in a first location;

placing means for placing new content associated with the device in a second location,

wherein the new content is an update to the preexisting content;

combining means for combining the preexisting content and the new content in a third location to form merged content; and

performing means for performing a check for viruses on the merged content prior to performing a transfer of the new content.

19. The data processing system of claim 18 further comprising:

sending means for sending the merged content to the device if a virus is absent from the merged content.

20. The data processing system of claim 18 further comprising:

storing means for storing the merged content as the preexisting content if a virus is absent from the merged content.

21. The data processing system of claim 18, wherein the device is a wireless device.

22. The data processing system of claim 18, wherein the device is one of a personal digital assistant, a laptop computer, a wireless telephone, and a personal computer.

23. The data processing system of claim 18, wherein the first location is a hard disk drive in the data processing system.
24. The data processing system of claim 18, wherein the first location is a hard disk drive in a storage system remote to the data processing system.
25. The data processing system of claim 18, wherein the third location is a random access memory in the data processing system.
26. The data processing system of claim 18, wherein the steps of placing, maintaining, and performing are initiated in response to a synchronization process between the data processing system and the device.
27. A data processing system for preventing transmission of viruses, comprising:
 - receiving means for receiving a request to synchronize a device;
 - identifying means for identifying new content associated with the device;
 - combining means for combining the new content with existing content to form merged content; and
 - checking means for checking the merged content for viruses prior to synchronizing the device.
28. The data processing system of claim 27, wherein the new content is content received from the device.

29. The data processing system of claim 27, wherein the new content is content to be sent to the device.

30. A computer program product in a computer readable medium for use in a data processing system for preventing exchange of viruses, the computer program product comprising:

- first instructions for maintaining preexisting content for a device in a first location;
- second instructions for placing new content associated with the device in a second location, wherein the new content is an update to the preexisting content;
- third instructions for combining the preexisting content and the new content in a third location to form merged content; and
- fourth instructions for performing a check for viruses on the merged content prior to performing a transfer of the new content.

31. A computer program product in a computer readable medium for use in a data processing system for preventing transmission of viruses, the computer program product comprising:

- first instructions for receiving a request to synchronize a device;
- second instructions for identifying new content associated with the device;
- third instructions for combining the new content with existing content to form merged content; and
- fourth instructions for checking the merged content for viruses prior to synchronizing the device.

EVIDENCE APPENDIX

There is no evidence to be presented.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings.